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09/505,735	02/16/2000	Alessandro Muti	MFCP.68276	6053

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EXAMINER
AVELLINO, JOSEPH E

ART UNIT	PAPER NUMBER
2143	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/505,735	Applicant(s) MUTI ET AL.	
	Examiner Joseph E. Avellino	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-28 are presented for examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on March 1, 2000 and July 16, 2001 respectively are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by Buch et al. (USPN 6,463,468) (hereinafter Buch).

4. Buch discloses a method of communicating between a client process and a server process over a network, the method comprising:

a. issuing to the server process a first download request which identifies a file and which request that the server process download a first segment of the file over the network (col. 12, lines 25-30);

b. downloading, by the server process, the first segment of the file (col. 12, lines 32-34);

c. issuing to the server process a further download request which is associated with the file and which requests that the server process download a further segment of the file over the network, provided the actual network bandwidth utilization is less than a threshold level (col. 12, lines 25-50);

d. downloading, by the server process, the further segment of the file (col. 12, lines 39-42; Figure 11);

e. repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network (col. 12, lines 35-50).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, and 14-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy et al. (USPN 5,913,040) (hereinafter Rakavy) in view of Riggan et al. (USPN 5,898,673) (hereinafter Riggan).

7. Referring to claim 1, Rakavy discloses a method of transferring a set of data over a network comprising:

monitoring the level of actual network bandwidth utilization (col. 14, lines 8-9);

calculating a threshold level of utilization as a function of the current monitored level of utilization (col. 13, line 66 to col. 14, line 7); and

if the actual level is less than the threshold level, receiving at least a portion of the set of data over the network (col. 14, lines 16-21).

Rakavy does not disclose identifying a maximum monitored level of actual utilization and that the threshold level of utilization is calculated as a function of the maximum monitored level of utilization. Riggan discloses another method of transferring data over a network comprising the steps of:

identifying a maximum monitored level of actual utilization (col. 9, lines 20-25); and

calculating a threshold level of utilization as a function of the maximum monitored level of utilization (absolute bandwidth) (col. 9, lines 20-25).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Riggan with Rakavy to provide a threshold based on the total bandwidth allotted to the node, which might be greater than the current bandwidth utilized, allowing a greater amount of bandwidth available to be allocated below the threshold.

8. Referring to claim 2, Rakavy discloses the client receives the data over the network from a server (col. 5, lines 32-39).

9. Referring to claim 3, Rakavy discloses said monitoring occurs at the interface between the client and the network (col. 14, lines 8-15).

10. Referring to claim 4, Rakavy discloses the network is the Internet (col. 5, lines 8-9).

11. Referring to claim 5, Rakavy discloses the threshold level is equal to a predetermined percentage of the maximum monitored level (col. 13, lines 35-44).

12. Referring to claim 6, Rakavy discloses the set of data includes a software update (col. 3, lines 60-62; col. 15, lines 22-27).

13. Referring to claim 7, Rakavy discloses repeating at least said monitoring step each time a portion of the set of data is received (Figure 6, reference character 43 and related parts of the disclosure).

14. Referring to claim 8, Rakavy discloses separately receiving a plurality of discrete portions of the set of data over the network when the actual level is less than the threshold level (col. 14, lines 32-60).

15. Referring to claim 9, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy does not disclose incrementing a counter each time a discrete portion of the data is received over the network. "Official Notice" is taken that both the concept and advantages of providing for incrementing a counter each time a portion of data is received is well known and expected in the art. It

would have been obvious to one of ordinary skill in the art to provide incrementing a counter each time a portion of data is received to the combined system of Rakavy and Riggan to keep an accurate track of the number of packets received for this data set.

16. Referring to claim 14, Rakavy discloses suspending the receipt of discrete portions of the data if the level of actual utilization becomes greater than the threshold level (col. 14, lines 16-21).

17. Referring to claim 15, Rakavy discloses resuming the receipt of discrete portions of the data from the point of suspension when the level of actual utilization becomes less than the threshold level (col. 13, lines 23-34).

18. Referring to claim 16, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy further discloses repeating said monitoring step each time a portion of the set of data is received (Figure 6, reference character 43 and related parts of the disclosure). Rakavy does not disclose identifying a maximum level of utilization during receipt of the set of data and calculating a threshold level of utilization for the set of data as a function of the maximum level of utilization identified during receipt of the set of data. Riggan discloses:

identifying a maximum level of actual utilization during receipt of the set of data (col. 9, lines 20-25); and

calculating a threshold level of utilization for the set of data as a function of the maximum level of utilization identified during receipt of the set of data (absolute bandwidth) (col. 9, lines 20-25).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Riggan with Rakavy to provide a threshold based on the total bandwidth allotted to the node, which might be greater than the current bandwidth utilized, allowing a greater amount of bandwidth available to be allocated below the threshold.

19. Referring to claim 17, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy does not disclose estimating the maximum level of utilization during receipt of the set of data by calculating an average level of utilization for the set of data upon repeating said monitoring step a predetermined number of times during receipt of the set of data. Riggan discloses estimating the maximum level of utilization during receipt of the set of data by calculating an average level of utilization for the set of data upon repeating said monitoring step a predetermined number of times during receipt of the set of data (col. 2, lines 16-34). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Riggan with Rakavy to provide an estimated utilization without needing to determine the actual value, resulting in more efficient processing and faster results.

20. Referring to claim 18, Rakavy discloses receiving at least a portion of the set of data over the network if the actual level is less than the threshold level for the set of data (Figure 6).

21. Referring to claim 19, Rakavy discloses receiving at least a portion of a second set of data over the network if the actual level is less than the threshold level for the set of data (col. 14, lines 32-60).

22. Referring to claim 20, it is inherent that the combined system of Rakavy and Riggan has a computer-readable medium having computer executable instructions because it instructs the computer in the steps to complete the method.

23. Referring to claim 21, Rakavy discloses a computer system having a memory, an operating system and a central processor being able to execute the instructions stored on the computer-readable medium (col. 4, lines 46-67).

24. Claims 22-27 are rejected for similar reasons as stated above.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Riggan as applied to claims 1 and 7-9 above, and further in view of Watanabe et al. (USPN 6,285,662) (hereinafter Watanabe).

25. Referring to claim 10, Rakavy in view of Riggan disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Riggan do not disclose the size of the discrete portions of the data is a function of the value of the counter. Watanabe discloses the size of the discrete portions of the data (contention window) is a function of the value of the counter (retransmission attempts) (col. 4, lines 59-63). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Watanabe with the system of Rakavy and Riggan for improved throughput rates and power consumption performance of the sending station as disclosed in Watanabe (col. 1, lines 19-21).

26. Referring to claim 11, Rakavy in view of Riggan disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Riggan do not disclose increasing the size of the discrete portions of the data when the value of the counter is greater than a predetermined value. Watanabe discloses increasing the size of the discrete portions of the data (contention window) when the value of the counter (retransmission attempts) is greater than a predetermined value (col. 5, lines 2-7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Watanabe with the system of Rakavy and Riggan for improved throughput rates and power consumption performance of the sending station as disclosed in Watanabe (col. 1, lines 19-21).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Riggan as applied to claims 1 and 7-9 above, and further in view of Elzur (USPN 6,427,169).

27. Rakavy in view of Riggan disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Riggan do not disclose clearing the counter after receiving all of the plurality of discrete portions of the data over the network. Elzur discloses clearing the counter after receiving all of the plurality of discrete portions of the data over the network (col.9, lines 29-31). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Elzur with Rakavy and Riggan to efficiently monitor the number of packets received for the data flow while minimizing the amount of memory space used.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Riggan as applied to claims 1 and 7-9 above, and further in view of Kalkunte et al. (USPN 6,078,591) (hereinafter Kalkunte).

28. Rakavy in view of Riggan disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Riggan do not disclose clearing the counter if the level of actual utilization becomes greater than the threshold

level. Kalkunte discloses clearing the counter if the level of actual utilization becomes greater than the threshold level (col. 8, line 59 to col. 9, line 7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Kalkunte with Rakavy and Riggan to efficiently monitor the bandwidth utilization of the system and to transfer packets of data according to the monitored bandwidth.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

30. Chimento, Jr. et al. (USPN 5,434,848) discloses a traffic management system in packet communication networks.

31. Tunnicliffe et al. (USPN 6,272,110) discloses a method for managing at least part of a communications network.

32. Nimon (USPN 5,432,781) discloses synchronous node controllers for a switching network.

33. Sugawara (USPN 5,638,360) discloses a method for measuring ATM cell rate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (703) 305-7855. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (703) 308-5221. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

JEA
November 20, 2002

DAVID WILEY
SUPERVISORY PATENT EXAMINER
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